

REMARKS

Claims 1, 3, 18, and 20-28 are pending. Claims 1, 3, and 21-25 are amended. No new matter is added by the claim amendments.

Claims 18, 20, and 26-28 are allowed, and Claims 22 and 24-25 are allowable. Applicants thank the Examiner for allowing those claims.

Examiner Interview

On October 6, 2009, Anthony Murabito and William Zarbis (for the Applicants) and Examiner Thai participated in a telephone interview to discuss Claim 1 in light of Japanese Application No. 02-054058 by Koichi. Applicants thank the Examiner for granting and participating in the interview.

35 U.S.C. § 103(a)

The instant Office Action states that Claims 1, 3, 21, and 23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Japanese Application No. 02-054058 by Koichi in view of United States Patent No. 5,437,017 by Moore et al. ("Moore"). Applicants have reviewed the cited references and respectfully submit that the embodiments of the present invention recited in Claims 1, 3, 21, and 23 are patentable over Koichi and Moore, alone or in combination.

Applicants respectfully submit that Koichi does not show or suggest an indication that a target instruction has been translated into a host instruction, as recited in the claims. Specifically, Applicants respectfully submit that Koichi does not show or suggest "means for providing an indication whether a first memory address to be written stores a target instruction which has been translated to at

least one host instruction that is stored at a second memory address, the at least one host instruction for execution by a host processor, the means for providing comprising: a look-aside buffer including a plurality of storage locations ... including a first storage location for the first memory address, and a storage position corresponding to the first storage location for storing the indication” as recited in independent Claim 1.

According to the Office Action, “converted” is being read as “translated.” Applicants do not admit that “converted” and “translated” are synonymous. For example, the Examiner is respectfully directed to page 25 of the application, starting at line 1, which summarizes a translation process: “The use of a translation buffer to hold translated instructions allows instructions to be recalled without rerunning the lengthy process of determining which primitive instructions are required to implement each target instruction, addressing each primitive instruction, fetching each primitive instruction, optimizing the sequence of primitive instructions, allocating assets to each primitive instruction, reordering the primitive instructions, and executing each step of each sequence of primitive instructions involved each time each target instruction is executed. Once a target instruction has been translated, it may be recalled from the translation buffer and executed without the need for any of these myriad of steps.” The Examiner is also respectfully directed to page 31 of the application, starting at line 9, which describes a translation: “The code morphing software ... includes a translator portion which decodes the instructions of the target application, converts those target instructions to the primitive host instructions capable of execution by the morph host, optimizes the operations required by the target instructions, reorders

and schedules the primitive instructions into VLIW instructions (a translation) for the morph host, and executes the host VLIW instructions.”

Also, according to the portion of page 25 of the application cited above, translated instructions are recalled without rerunning the translation process each time each target instruction is executed. However, according to Koichi, an exclusive instruction code is converted “[a]t the time of executing an instruction.”

Irrespective of the discussion above, Koichi makes no mention of the claimed indication in association with an instruction, regardless of whether the instruction is converted or translated.

According to the Office Action (page 6), the claimed indication is embedded in the system of Koichi. However, there is no teaching or even a suggestion in Koichi that the claimed indication is embedded in Koichi’s system.

Applicants respectfully submit that there is no showing or suggestion in the reference that Koichi’s system stores a translated (e.g., host) instruction. Also, Applicants respectfully submit that there is no showing or suggestion in the reference that Koichi’s system stores a memory address that stores a non-translated (e.g., target) instruction. Furthermore, Applicants respectfully submit that there is no showing or suggestion in the reference that Koichi’s system stores, with a memory address for a non-translated instruction, an indication that the non-translated instruction at that memory address has been translated.

In summary, Applicants respectfully submit that Koichi is lacking in many respects. It would appear that the Examiner's interpretation of Koichi is a strained attempt to make Koichi read on the claimed invention. Applicants respectfully submit that such an interpretation could be made only by hindsight gleaned from the Applicants' own disclosure, and of course such hindsight is impermissible.

Applicants respectfully submit that Moore does not overcome the shortcomings of Koichi. As understood by the Applicants, Moore only maintains coherency between a virtual address and a physical address translated from the virtual address. However, the claimed indication is not concerned with the translation between a virtual address and a physical address. As noted above, the claimed indication pertains to the translation between a target instruction and a host instruction.

In summary, Applicants respectfully submit that Koichi and Moore, alone or in combination, do not show or suggest the features of Claim 1 cited above. Therefore, Applicants respectfully submit that the basis for rejecting Claim 1 under 35 U.S.C. § 103(a) is traversed and that Claim 1 is in condition for allowance.

Each of the Claims 3, 21, and 23 includes all of the features of Claim 1 plus additional features. Applicants respectfully submit that Koichi and Moore do not show or suggest the features of Claims 3, 21, and 23 in combination with the features of Claim 1, and also that Claims 3, 21, and 23 are in condition for allowance at least because they depend from an allowable claim. Consequently,

the Applicants respectfully assert that the basis for rejecting Claims 3, 21, and 23 under 35 U.S.C. § 103(a) is also traversed.

Conclusions

In light of the above remarks, Applicants respectfully request reconsideration of the rejected claims. Based on the arguments presented above, Applicants respectfully assert that Claims 1, 3, 21, and 23 overcome the rejections of record and, therefore, Applicants respectfully solicit allowance of these claims.

The Examiner is invited to contact Applicants' undersigned representative if the Examiner believes such action would expedite resolution of the present application.

Please charge any additional fees or apply any credits to our PTO deposit account number: 50-4160.

Respectfully submitted,
MURABITO HAO & BARNES L.L.P.

Dated: 10-13-09

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